Page 7, lines 19 and 24, please replace "hybridising" with –hybridizing–.

Page 8, line 6, please replace "hybridise" with –hybridize–.

Page 14, line 6, please replace "cross-hybridise" with –cross-hybridize–.

IN THE CLAIMS:

1. (Twice Amended) A pair of distinct nucleic acid probes having comparable size, said size being selected from the group consisting of from 1 to 100 kb, from 1 to 10 kb, 7 to 15 kb, 10 to 20 kb, 10 to 30 kb, 20 to 40 kb, 30 to 50 kb, 40 to 60 kb, 50 to 70 kb, 60 to 80 kb, 70 to 90 kb, and 80 to 100 kb, and flanking a potential breakpoint in a chromosome, each of said [probe] pair of distinct probes being labelled with at least one different reporter molecule.

2. (Twice Amended) A pair of distinct nucleic acid probes of comparable size, said size being selected from the group consisting of from 1 to 100 kb, from 1 to 10 kb, 7 to 15 kb, 10 to 20 kb, 10 to 30 kb, 20 to 40 kb, 30 to 50 kb, 40 to 60 kb, 50 to 70 kb, 60 to 80 kb, 70 to 90 kb, and 80 to 100 kb, and flanking a potential breakpoint in a chromosome, which pair of distinct nucleic acid probes hybridize to a nucleic acid molecule at a genomic distance of from about 50 kb to no more than 100 kb.

3. (Twice Amended) The pair of distinct nucleic acid probes of comparable size of claim 1, which pair of distinct nucleic acid probes [hybridise] hybridize to a nucleic acid molecule at a genomic distance of from about 50 kb to no more than 100 kb.

4. (Twice Amended) The pair of distinct nucleic acid probes of claim 2, each of said pair of distinct nucleic acid probes being labelled directly or indirectly with at least one reporter molecule.

5. (Twice Amended) The pair of distinct nucleic acid probes of claim 4 wherein the at least one reporter molecule is selected from the group consisting of enzymes, chromophores, fluorochromes, and haptens.

Sub D3

6. (Twice ~~Amended~~) The pair of distinct nucleic acid probes of claim 5 wherein the probes [hybridise] hybridize to a single corresponding nucleic acid molecule.

7. (Twice Amended) The pair of distinct nucleic acid probes of claim 6 wherein the single corresponding nucleic acid molecule is at least a fragment of a chromosome.

8. (Twice Amended) The pair of distinct nucleic acid probes of claim 7 wherein the chromosome is not aberrant.

9. (Twice Amended) The pair of distinct nucleic acid probes of claim 1 which [hybridise] hybridize *in situ.*

10. (Twice Amended) The pair of distinct nucleic acid probes of claim 9, which pair of distinct probes each [hybridise] hybridize *in situ* [under low-stringent conditions] to only a few linear DNA molecules per cell.

Sub D4

11. (Twice Amended) A method of detecting a nucleic acid molecule having a chromosomal aberration, said method comprising[using of the pair of nucleic acid probes of claim 1]:

providing a pair of distinct nucleic acid probes to analyze a sample believed to contain said nucleic acid, said distinct nucleic acid probes having comparable size, said size being selected from the group consisting of 1 to 100 kb, 1 to 10 kb, 7 to 15 kb, 10 to 20 kb, 10 to 30 kb, 20 to 40 kb, 30 to 50 kb, 40 to 60 kb, 50 to 70 kb, 60 to 80 kb, 70 to 90 kb and 80 to 100 kb, and said distinct nucleic acid probes flanking a potential breakpoint in a chromosome, each of said pair of distinct probes being labeled with at least one different reporter molecule;

hybridizing said distinct nucleic acid probes to said nucleic acid; and

detecting the presence of said reporter molecule.

12. (Twice Amended) A method of detecting cells suspected of having a chromosomal aberration, said method comprising[analyzing said cells or said cell's nucleic acid with the pair of nucleic acid probes of claim 1]:

providing a pair of distinct nucleic acid probes to analyze nucleic acid of said cells, said distinct nucleic acid probes having comparable size, said size being selected from the group consisting of 1 to 100 kb, 1 to 10 kb, 7 to 15 kb, 10 to 20 kb, 10 to 30 kb, 20 to 40 kb, 30 to 50 kb, 40 to 60 kb, 50 to 70 kb, 60 to 80 kb, 70 to 90 kb and 80 to 100 kb, and said distinct nucleic acid probes flanking a potential breakpoint in a chromosome, each of said pair of distinct probes being labeled with at least one different reporter molecule;

hybridizing said distinct nucleic acid probes to the nucleic acid of at least one of said cells; and

detecting the presence of said reporter molecule.

17. (Amended) ~~The~~ pair of distinct nucleic acid probes of claim 1 wherein the probes [hybridize] hybridize to a single corresponding nucleic acid molecule.

18. (Amended) The pair of distinct nucleic acid probes of claim 17 wherein the single corresponding nucleic acid molecule is at least a fragment of a chromosome.

19. (Amended) The pair of distinct nucleic acid probes of claim 18 wherein the chromosome is not aberrant

20. (Amended) The pair of distinct nucleic acid probes of claim 3 wherein the probes [hybridise] hybridize to a single corresponding nucleic acid molecule.

21. (Amended) The pair of distinct nucleic acid probes of claim 20 wherein the single corresponding nucleic acid molecule is at least a fragment of a chromosome.